### DEPARTMENT OF THE ARMY MRD-R 415-1-6

# Missouri River Division, Corps of Engineers

# P.O. Box 103, Downtown Station Omaha, Nebraska 68101-0103

MRDCO-C

MRD Regulation No. 415-1-6

15 March 1986

# Construction QUALITY ASSURANCE MANAGEMENT

- 1. <u>Purpose</u>. This regulation establishes policies and procedures for the Missouri River Division Quality Assurance Program.
- 2. Reference.
  - a. ER 415-1-302 Inspection and Work Records
  - b. ER 415-1-10 Contractor Submittal Procedures
  - c. ER 1180-1-6 Construction Quality Management
  - d. ER 1110-1-263 Chemical Quality Management
  - e. ER 415-1-11 Biddability, Constructibility and Operability
  - f. MRD-R 1110-1-6 Laboratory Testing Services
  - g. MRD-R 1110-1-9 Control of Field Testing Procedures
- 3. Applicability. This regulation is applicable to District and Division offices of the Missouri River Division.
- 4. <u>Policy</u>. The policy of the Missouri River Division is to provide a quality product on a timely basis at a reasonable cost. The key to achieving a quality product is the development and implementation of a comprehensive and effective quality assurance program at each field office activity. The essentials of such a program will be formulated and monitored by the Districts and will ensure, as a minimum, the following requirements.
- a. Enforcement of contract requirements by all construction personnel.
- b. Approved Contractor Quality Control (CQC) plan prior to initiation of work on each contract.
- c. Quality Assurance (QA) organization at all field activities with assigned responsibility.
- d. QA testing plan and QA laboratory selected for verification testing.

MRD-R 415-1-6 15 Mar 86

- e. QA personnel will receive required training appropriate with needs.
- f. QA reporting necessary for documentation of contractors' performance.
- g. A QA deficiency correction procedure will be established for continuity.
- h. Implementation of a feedback information system from the user on information from post Beneficial Occupancy Date (BOD) inspections.

# 5. Procedures.

#### a. Pre-award.

- (1) Constructibility reviews will be performed at the field office and District level and comments furnished Not Later Than (NLT) suspense date established by Engineering Division. Coordination between Construction and Engineering Division will ensure that all comments from the field are addressed. Reasons for not incorporating comments into final design will be furnished by Engineering Division to Construction Division.
- (2) Plan-in-hand/site surveys will be performed by the assigned field office personnel in coordination with the designer, engineering project manager, and installation personnel at concept stage to assure all utilities, structures, and site conditions are identified, compatible, and accurately shown on contract documents. This survey should be documented by the engineering project manager.

#### b. After Award.

- (1) Before construction starts, the contractor shall meet with the Contracting Officer or a representative to develop a mutual understanding of the inspection system requirements and interrelationship of the contractor and the Government inspection. Before construction begins, the contractor will submit for approval a quality control plan, outlining the inspection plan, procedures, instructions, and reports to be used. The plan will include:
- (a) Inspection staff (quantity, qualifications, authority and responsibilities).
  - (b) Procedures on inspection of subcontractors' work.
- (c) Testing requirements (procedures, number of tests, name of approved testing lab and reports to be used).

- (d) A copy of a letter of direction to the contractor's quality control representative outlining duties and responsibilities and signed by a responsible officer of the firm.
  - (e) Contractor will submit daily CQC reports in writing.
- (2) All Quality Control (QC) and Quality Assurance (QA) personnel will be thoroughly familiar with the contents of the approved contractor's quality control plan. Daily QA reports will be prepared by each quality assurance representative. The original report will be attached to the original CQC report and filed in the official contract folder.
  - (3) QA/QC test plans will be prepared before testing begins.
- (4) A construction deficiency tracking system will be maintained for each contract to ensure continuity and follow-up of deficiencies noted in correspondence to the contractor or in QA reports where a deficiency was not corrected on the date of report.
- (5) An informal training program will be implemented by each Area Engineer/Resident Engineer (AE/RE) Office to improve individual quality assurance representatives knowledge of contract technical provisions and proper construction techniques. A minimum of 16 hours of training per year will be conducted at each field office. Training should focus on crosstraining, strengthening individual weaknesses, as well as preparation for upcoming critical construction activities. AE/RE Office quarterly training schedules will be reviewed by the District Office.

## 6. Responsibilities.

## a. Division.

- (1) Commander. Allocate and distribute resources to the Division and Districts to ensure adequate QA staffing to support and implement a Quality Assurance Program.
  - (2) Construction-Operations Division
- (a) Will advise Division Commander and staff on Quality Assurance matters.
- (b) Will Conduct Construction Quality Management Program Reviews of the Districts semiannually.
- (c) Will monitor and evaluate quarterly field Quality Assurance/Quality Control Programs for effectiveness.

MRD-R 415-1-6 15 Mar 86

- (d) Will direct, promote, and support the Quality Assurance/Quality Control programs.
- (e) Will coordinate schedules of USACE Design-Construction Evaluation and follow-up report requirements.

## (3) Engineering Division

- (a) Perform laboratory inspections for compliance to standards.
  - (b) Participate in design-construction evaluation inspections.
- (c) Monitor and direct effective procedures to incorporate review comments into contract package.

#### b. District.

#### (1) Commander

- (a) Establishes overall policies, goals and objectives to ensure proper emphasis for the conduct of an effective quality assurance effort.
- (b) Allocate/distribute District resources to ensure QA staffing adequate to accomplish quality construction.

### (2) Construction Division

- (a) Advises the District Commander and staff on quality assurance matters.
- (b) Provides overall staff management and inspection responsibility for the administration of the District's QA Program.
- (c) Develops and monitors laboratory and testing procedures to ensure compliance with contract requirements.
- (d) Coordinates, schedules, and assigns members for technical assistance visits to field offices.
- (e) Ensures all review comments are furnished to allow for incorporation into contract documents.
- (f) Develops and coordinates District wide training schedules for field employees and makes arrangements for USACE training through coordination with District Personnel Office.
  - (g) Develops and maintains a quality measuring process.

## (3) Engineering Division

- (a) Develop and implement a design review program to ensure all comments are addressed, evaluated and included in the contract package prior to opening.
- (b) Develop and implement a plan-in-hand checklist to verify site conditions with participation by the project managers, designers, field project office representatives and installation personnel.
- (c) Evaluate and utilize feedback information from post BOD inspections for future designs and contract document preparation.

FOR THE COMMANDER:

/s/
MARION L. CALDWELL, JR.
Colonel, Corps of Engineers
Deputy Commander

DISTRIBUTION:

A - MRD

MROCD - 15

MRKCD - 15